Case study #	2.3
Title	Damage of LD-SLT and DCS telecommunication equipment
Type of trouble	Damage.
Source of trouble	Lightning.
System affected	Transmission equipment.
Location	Telecom centre.
Keywords	Damage, lightning surge.
Version date	2004-01-01

System configuration

A system configuration and an estimated current flow are shown in Figure 2.3-1. This telecommunication centre is a co-location building. Company A's telecommunication equipment and another company's equipment are sharing one same floor of the building. The radio equipment is connected to the antennas as shown in Figure 2.3-1. The power supply equipment located on the first floor is used to distribute DC power to both companies' telecommunication equipment. IBS in the figure is a DC power distribution module.

Company A's telecommunication equipment is powered through the IBS, while the other company's equipment is powered through the PDF, where PDF and IBS are power distribution frames. The PDF and IBS are also connected to the RF located on the first floor. DCS is a clock-supplying equipment that provides the clock signal to the radio equipment CR-822. CR-822 has a telecom interface and is connected to the switching equipment LD-SLT through a DF (a distribution frame). At this telecom centre, LD-SLT, SLM, DCS, and PSF were damaged by lightning.

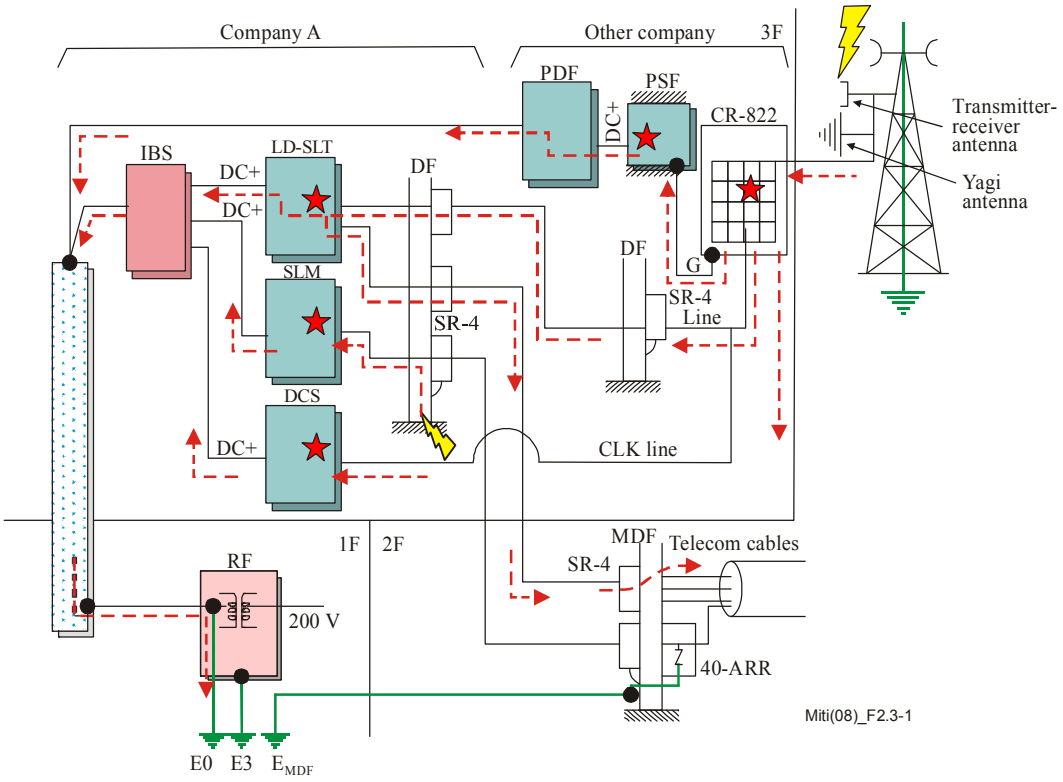

Figure 2.3-1 – A system configuration and an estimated surge current